UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/690,925	10/17/2000	Hardy Lee Crumby	IGT1P040	3189

22434	7590	10/03/2003

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ART UNIT	PAPER NUMBER
3713	/3

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *14 July 2003* .

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-40* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-40* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

　　If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☐ All b) ☐ Some * c) ☐ None of:

　　　1. ☐ Certified copies of the priority documents have been received.

　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

　　a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 10, 12-14, 16-17 and 21-28 are rejected under 35 U.S.C. 102(b) as being

anticipated by Acres et al. (US Patent No. 5,741,183).

Though specific sections of the Acres et al. document may be cited, the rejection is based

upon the disclosure of Acres et al. in its entirety.

Acres et al disclose a gaming system and method wherein a slot machine is connected

through a multiplexer device to a gateway device where it is then connected to a one or more

game service servers that provide one or more gaming services (FIG 1). Each gaming device is

a slot machine thus it is notoriously well known that it would be inherent that each machine has a

master gaming controller designed to control a game played on the machine wherein the game

includes receiving a wager, determining a game outcome, and presenting the game outcome.

The gaming machine communicates with a plurality of game service servers. These

game service servers include a bonus game server (Column 10, lines 1-5), a player-tracking

database, an accounting database, and means for cashless ticketing (Column 7, lines 1-5). This is

accomplished by the electronic module serving as a communications multiplexer device (FIG 2)

to collect data relating to accounting information and player tracking (Column 7, lines 1-2) and

then providing this data over the same network (Column 7, lines 1-2) to be sent to a gateway

device that then can provide the data to a plurality of database servers (Column 32, lines 23-27).

This communication is done with a communications multiplexer device in the form of an

electronic module with a data communications node and a multi-port communication board in

the form of a personality board that is connected to the master gaming controller (FIG 2,

reference 225) wherein the multiplexer device is transparent to the gaming machine. This is

accomplished as the data is obtained from various player-tracking and accounting services and

then sent through the multiplexer device into the network without the machine knowing the

multiplexer device is in the communication path. This transparency is supported by the fact that

the personality board allows the device to be readily removed and reinstalled in the network

without any manual configuration (Column 16, lines 53-55). Further, this electronic module can

be inserted into a variety of pre-existing gaming devices (Column 8, lines 42-45) thus obtaining

transparency as defined by the Applicant by allowing the gaming machine to send messages over

the network assuming it will reach the server without knowing the hardware between itself and

the particular server. Further, the module can be inserted into the gaming machine without any

disclosed software changes.

The communication multiplexer device includes a number of communication ports

wherein each port is capable of transmitting and receiving messages with the master gaming

controller using a native communications protocol thus emulating the native communication

protocol that will be implemented in each of the different ports. This communication is done at

least over a serial (Column 9, lines 46-52) or a discrete interface (Column 10, lines 15-20) with a

physical interface of RS-232 to connect them wherein a plurality of optocouplers are coupled

between the discrete outputs of the gaming machine and the communications multiplexer device

to allow communications in (Column 10, lines 17-20). The communication between the

communications multiplexer device and the master game controller is in a number of native

communication protocols associated with serial and discrete interfacing. This native protocol is

associated with that of a player tracking service and a progressive game service (FIG 2, PT,

player tracking module and DCN, data communication module). Each of these ports has a

different protocol as they are used over a machine configuration port, a serial communication

port, and a discrete communication port. Each port will then emulate the correct protocol for

communication to properly occur. Therefore, each of these ports on the multi-port personality

board allow each port of the personality board of the multiplexer device to accept multiple native

protocols as it is notoriously well known that discrete and serial communications are a different

protocol as discrete is a packet transmission and serial is not a packet transmission of data.

Hence, each of these ports comprises different protocols and each port receives messages at the

protocol depends on the server device from which they came. These ports can then send and

receive messages from the service servers. For example, a message will be received, converted

into the proper native protocol, and transmitted at the machine reconfiguration port (FIG 2,

reference 84) if it came from the bonus server in order to reconfigure the paytable, while a

message sent from the accounting server regarding the machine information will received at the

port for discrete machine interface for the DCN to accept (FIG 2, reference 72; Column 17, lines

59-61). Such protocols include any communication protocol that can be used to implement this

communication path over the serial machine interface as is known in the art, for example, data

packets including command codes, message sequences, CRC, and variable length messaging

(Column 23, lines 11-15).

The communications multiplexer device also inherently includes a power supply, as it

would not be able to run without a source of power. Further a network interface board is

disclosed (FIG 2, reference 201). Though the network is disclosed in a preferred embodiment to

be that of an Ethernet network using TCP/IP (Column 7, lines 38-40) it is also embodied as a

wireless network (Column 37, lines 51-54), thus if embodied as such the network interface in the

multiplexer device would inherently provided a wireless interface.

The output port of the communication multiplexer device transmits and receives

messages with the one or more game service serves using a second communications protocol

over a network interface. The multiplexer device is connected to the game service servers

through the gateway device in the network (FIG 1). This network is disclosed as a high-speed

network, such as Ethernet, so the second communication protocol would inherently be different

than the serial and discrete communications protocol of the first device as the protocol language

of the Ethernet is TCP/IP.

The data communications node of the multiplexer device allows the device to

communicate with both the network and the gaming machine. The processor logic of the

multiplexer device then allows the messages received from the gaming machine in serial and

discrete format to be sent over the network (Abstract) as well as to receive messages from the

network (Abstract). Thus, the logic allow from the device to multiplex and de-multiplex

between the plurality of ports and the output port. This is inherently done as all messages sent

through the personality board of the multiplexer device are converted to a format understood by

each respective device.

The network interface of Acres et al. is disclosed in a preferred embodiment to be a wired

Ethernet connection (Column 7. lines 39-41); however, Acres et al. also disclose that it is

possible to implement the network as a wireless network (Column 37, lines 51-54). Henceforth,

it would be inherent to the functionality of the network if it were to be embodied as wireless, that

an antenna be present for transmitting and receiving information over the wireless network.

Thus, in summary, the electronic multiplexing device of Acres et al. can be inserted into

any existing machine in order to allow communication with the game service servers. Thus, the

device is transparent to the master gaming controller. It then allows data generated in the master

gaming controller to be sent to a gateway device through the multiplexer. This data can be sent

to the multiplexer in various formats including accounting services and player tracking services

format but it is broadcast to the gateway device in a standard protocol for Ethernet, i.e. TCP/IP to

be provided to the game service servers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness
    or nonobviousness.

Claims 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

anticipated by Acres et al. in view of Alcorn et al. (US Patent No. 6,149,522).

What Acres et al. disclose has been discussed above and is incorporated herein.

Acres et al. does not disclose the encryption of communication data between the gaming

machine and one or more of the game service servers.

Alcorn et al. disclose that in order to be acceptable for casino use, an electronic gaming

system must provide both security and authentication (Column 1, lines 42-44). It would be

essential to the intent of this requirement that encryption and authentication also be provided for

communications between machines and servers. Therefore, it would be obvious to one skilled in

the art at the time of invention to employ the methods taught by Alcorn et al. for casino security

to the communications across the network in order to provide a system that is known and trusted

to be secure and can not be infiltrated by those without access. Furthermore, the usage of a

firewall would have been obvious to the system of Acres et al., as it is notoriously well known to

use a firewall as a means for securing data as is required in the casino as taught by Alcorn et al.

Claims 15, 18-19, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Acres et al. (US Patent No. 5,741,183).

What Acres et al. disclose has been discussed above and is incorporated herein.

The communications multiplexer device also contains and memory (FIG 2, reference 48)

that provides machine configuration information (FIG 2, reference 84). This memory is

disclosed as ROM but is also embodied to be erased and rewritten (Column 9, lines 11) thus the

use of an EEPROM would be obvious to one of ordinary skill in the art as an EEPROM is know

to be used so it can be erased and rewritten to.

Though Acres et al. do not explicitly disclose the number of communication ports

available, it is shown in one embodiment to have four ports. It is notoriously well known that a

multiplexer device can have any number of ports that are to exponentially related to base 2.

Hence, if more communication is desire, it would have been obvious to one of ordinary skill in the art to allow the multiplexer device to have $2^3 = 8$ or $2^4 = 16$ ports as both numbers are the results of raising two to a certain exponent.

Further, though Acres et al. do not explicitly disclose that the gaming machines employ regulated gaming software, it would be inherent and obvious to the fact that the system is for use in a casino that the gaming software would absolutely be regulated in order to be present in the casino. It is notoriously well known in the art that all software in a gaming casino much be heavily regulated in order to keep track of the fact that the casinos must adhere to the odds presented. The system will therefore allow this software present in the gaming machine to provide messages to the multiplexer device in the native communication language based upon the port that is used. Further, the system will then not accept message transmitted in the second language, as all messages from the network must first go through the multiplexer device and then will be sent to the appropriate port and then sent to the gaming machine in the proper protocol (FIG 2).

Claims 11 and 31-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acres et al. (US Patent No. 5,741,183) in view of O'Toole (US Patent No. 6,345,294).

What Acres et al. disclose has been discussed above and is incorporated herein.

Acres et al. disclose a gateway device that communicates with a number of personality boards that identify the gaming device to the gateway device via a unique number. The gateway device also communicates with a plurality of servers in the network. The floor controller is in charge of communication with all the gaming devices and provides messages to each based an address matched up to the multiplexer device.

Acres et al. do not disclose the use of a boot server to be used in the addressing of the devices.

O'Toole et al. provide a teaching of what a boot server is and the functionality of one. O'Toole discloses that upon being powered on an apparatus can make use of known protocols of bootp or DHCP requests to obtain a source of network parameters. The boot server or DHCP server is a computer that acts as a server in the local networking environment and that responds to certain types of route request messages. A boot server or DHCP server typically responds with a small message that contains some parameters that the requesting computer or device needs to be given. These parameters typically include the IP address of the apparatuses that is attempting to boot, the subnet makes of the appliance, the IP addresses of one or more routers, one ore more name servers, as well as numerous other optional parameters (Column 7, lines 40-60).

As taught by O'Toole et al. the functionality of a boot server is vital to a network communication among devices. The boot server will provide IP addresses to the device attempting to boot as well as the addresses of other devices and servers as an aide in the routing of messages. Furthermore, because it is disclosed that the boot server can provide any information relating to initialization or routing, it would be axiomatic that this boot server would be able to provide specific protocols as being used by the ports.

It would have been obvious to one of ordinary skill in the art to incorporate a boot server into the system of Acres et al. in order to simplify the network booting process. One would be motivated to do so because by this incorporation, the system would be able to address the multiplexers located outside the boot server in one central location upon booting, instead of relying on the multiplexers to provide the address to the central location gateway device. By this

incorporation, the system of Acres et al. could incorporate a boot server, in addition to the plurality of servers already disclosed to be linked to the gateway device, to aid in initializing and mapping of the large number of communication ports in the gaming device in order to cut down on hardware required in each gaming device to account for addressing, while at the same time reducing the costs by creating a central boot server in accordance with the gateway device that would be in charge of servicing and routing requests from the other servers.   Therefore, messages could be received and transmitted at the boot server and already contain an address (as already determined by the boot server) for the correct port or server. The boot server could then easily route the message either to the port or from the port based on the address. By incorporating this boot server, the entire process of addressing disclosed in Acres et al. would be simplified to one central location in charge of all parameters, thus providing a simplification that is highly desired and vital in networking as disclosed by O'Toole et al.

Response to Arguments

Applicant's arguments filed 14 July 2003 have been fully considered but they are not persuasive and the claims remain rejected as repeated above.

The Applicant's arguments are based on the fact that the Applicant does not believe that the gaming board in Acres is transparent. Applicant asserts that the board is not transparent in that the gaming machine knows the board is in the path between it and the server. Therefore, the module cannot be said to be transparent to the gaming controller because the initialization of the communication between the two requires a reply from the master gaming controller.

While the Examiner has considered the merits of the arguments, the arguments are not persuasive, as the do not overcome the asserted transparency by the Examiner. First, the

Examiner asserts that just because the electronic module communicates with the gaming machine

during power up and requires a reply does not mean that the gaming machine must know what it

is replying to and Applicant has given no support for the fact. Secondly, the Examiner asserts

that this device is indeed transparent in that even though the master gaming controller does send

out signals, the master gaming controller does not have to know the device is there to receive the

signals or all the details of the inner working of the device to work. It only knows to send out

signals indicating its activity. Thus the functionality that defines the device itself renders the

device transparent to the controller, as no function is visible. The master gaming controller can

send out information and doesn't know how it is received or used, only that it must be sent, thus

the module is transparent in that the processor does not need to know it's working or what is

done with the signal. Further support for this transparency lies in the fact that the electronic

module allows the device to be readily removed and reinstalled in the network without any

manual configuration (Column 16, lines 53-55). Further, this electronic module can be inserted

into a variety of pre-existing gaming devices (Column 8, lines 42-45) thus obtaining

transparency as defined by the Applicant by allowing the gaming machine to send messages over

the network assuming it will reach the server without knowing the hardware between itself and

the particular server.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to C. Marks whose telephone number is (703)-305-7497. The

examiner can normally be reached on Monday - Thursday (7:30AM - 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Teresa J Walberg can be reached on (703)-308-1327. The fax phone number for the

organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703)-308-1148.

cmm
September 30, 2003

Teresa Walberg
Supervisory Patent Examiner
Group 3700